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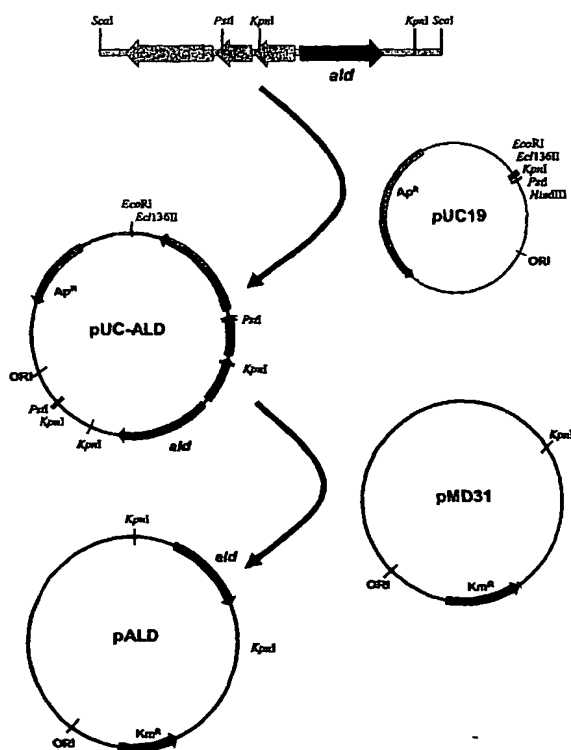
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(54) Title: TUBERCULOSIS VACCINES INCLUDING RECOMBINANT BCG STRAINS EXPRESSING ALANINE DEHYDROGENASE, SERINE DEHYDRATASE AND/OR GLUTAMINE SYNTHETASE

(57) Abstract: The invention relates to a live recombinant *Mycobacterium bovis*-BCG strain comprising a nucleic acid capable of expression, the nucleic acid encoding at least one protein or polypeptide that exhibits alanine dehydrogenase activity, glutamine synthetase activity, or serine dehydratase activity.





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